Abstract

The contribution of the service sector to the economy for the developing countries like India is significant. Hence, many of the researchers are focusing to study on improving this sector. Improvement of technology and implementation of scientific approaches are the important aspects, need to be studied for improving the service rates of the centers and also to retain its role for contributing much for the economy and the customer satisfaction.

With advent of liberalization and globalization, automobile Industry sector in India has shown a significant growth over the past two decades. India has become the second largest producer of four wheeler vehicles after China. Studies reveal that when compared to the growth rates of four wheelers, there is no proportionate increase in the service centers as a result, servicing rates are decreasing and average delay is increasing which causing the customer dissatisfaction. In this backdrop, the objectives have been framed to study the service centre and proposing the some improvements to enhance the service rate, which in turn improves the growth of the sector.

A questionnaire survey methodology was used to study the current status of the four-wheeler service centers and the various issues involved. The responses show, although quality and the competitive prices are their service attributes and priorities, with the shortage of
technical manpower, lack of scientific approaches, average servicing rate and waiting time of vehicles are increasing and couldn't deliver the vehicles on the same day etc. are the issues for the service centers.

A discrete event simulation model has been carried out to study and identify the servicing mechanism of the servicing centers. The analysis shows as the number of arrival rates increases the delivery rates are proportionally decreasing and average waiting time of the vehicles are also increasing. This analysis also brings out that the majority of the vehicles are getting delayed in a one critical activity, which consists of five major servicing operations.

Study indicates that the operations involved are dependent and not being carried out in systematic way. Further discussion had with the respondents, importance of proper sequence operations is recognized. The operations are analyzed further and an optimal sequencing is proposed to minimize the overall completion of the critical operation. A lexicographic search technique is used to generate the solution. The results shows that the proposed sequence reducing the average waiting time of the vehicle drastically and leads to improve the delivery rate of the centre as well.
List of Publications from This Thesis Work


